

ABSTRACT OF THE DISCLOSURE

A magnetic recording medium including at least one Cu-containing magnetic recording layer (CuML) comprised of a Cu-containing magnetic alloy material selected from the group consisting of:

- (a) a CoCrPtBCu alloy having a composition represented by the formula $\text{Co}_{100-x-y-z}\text{-}_{\alpha}\text{Cr}_x\text{Pt}_y\text{B}_z\text{Cu}_{\alpha}$, wherein $0 < x \leq 20$, $0 < y \leq 30$, $0 < z \leq 24$, and $0 < \alpha \leq 10$;
- (b) a CoCrPtBCu alloy having a composition represented by the formula $\text{Co}_{100-x-y-z}\text{-}_{\alpha}\text{Cr}_x\text{Pt}_y\text{B}_z\text{Cu}_{\alpha}$, wherein $0 < x \leq 30$, $0 < y \leq 30$, $7 < z \leq 24$, and $0 < \alpha \leq 10$; and
- (c) a CoCrTaCu alloy having a composition represented by the formula $\text{Co}_{100-x-y-z}\text{-}_{\alpha}\text{Cr}_x\text{Ta}_y\text{Cu}_{\alpha}$, containing less than 30 at. % Cr, up to 8 at. % Ta, and up to 10 at. % Cu.